# The Taunton Bay Study

Frank Dorsey - June 2, 2006

The Taunton Bay Study, a Pilot Project in Collaborative Bay Management was funded for one year in April 2005 - in part by the Maine State Planning Office, Maine Department of Marine Resources, and the National Oceanic and Atmospheric Administration and in part by Friends of Taunton Bay.

# Talk Organization

- The Study was organized into five major working groups: Economics, Governance, Indicators, Mapping/Information and Outreach. These groups communicated by monthly, open to the public, meetings of work group representatives.
- This talk presents some of the findings of the study including problems for some of which we propose solutions, some of which remain challenging.

MANAGEMENT STRUCTURE

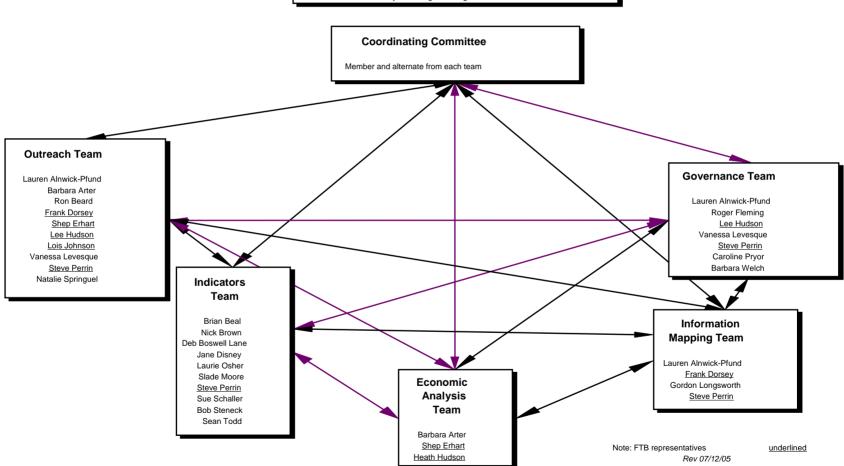
#### THE TAUNTON BAY STUDY

A Pilot Project in Collaborative Bay Management

#### Friends of Taunton Bay

**Executive Committee** 

Policy and budget oversight



# **Economics Working Group**

- 8.5% of households in Hancock, Sullivan and Franklin depend on marine resources for some income
- Local harvesters held 12% of Hancock County licenses between 1999 and 2004. There was a 20% decline in area license holders in the period.
- Bay level catch data were not available except by interviews with individual harvesters. This resulted in a wide range of economic estimates: \$4,000,000 to \$10,000,000

#### **Economics Working Group Recommendations**

- Consider a more comprehensive review of the local marine economy.
- Devise methods for sharing bay- or harvester-level data without threatening harvester confidentiality.
- Intensify efforts to engage harvesters and town officials.
- Develop action items to address local fisheries management issues.
- MDMR and other researchers should develop local maximum sustainable yield and optimum sustainable yield models for the bay using ecosystem-based management principles.

#### **Indicators**

- Costly in expertise, effort and dollars
- Need to be a mix of statewide standards and local necessities
- Critical to rational management

• Report Card format seems to be generally acceptable.

#### **Indicators Schema**

- Species of Special Concern (4) Horseshoe crabs, harbor seals, shorebirds, eagles
- Ecosystem and Structure (4) Eelgrass spread and density, benthic invertebrates, clam growth and predation, commercial landings
- Toxicology (3) Mussel assay, fecal coliform bacteria, phytoplankton
- Physical Conditions (8) Weather, dissolved oxygen, transparency, surface temperature, bottom temperature, etc
- Watershed Concerns (2) Native vegetation buffers, septic systems
- Other (3) Oyster set, invasive species, ecohistory narrative

(Blue indicates current monitoring by outside agency)

# **Selected Indicators Findings**

- Horseshoe crabs "holding their own" in Egypt and Hog Bays.
- Harbor seal population is 75 80.
- Of 5 bald eagle nests, only one had reproductive success in 2005
- Flocks of migratory shorebirds are notably smaller than 20 years ago.
- A few eelgrass beds line the lower channel, but beds on the flats have yet to recover.
- Benthic invertebrate samples in Hog Bay included no clam worms and only small blood worms.
- No Asian shore crabs were found in Egypt Bay.
- Bay-specific landings data are not available for any harvested species.

# **Mapping**

- Intended to develop transferable community mapping capabilities to provide products useful to collaborative decision making and bay management in a watershed setting
- Developed jointly with the Geographic Information Laboratory at College of the Atlantic
- Standards discussed with the Muscongus Bay project and and Maine Office of GIS

#### **Map Themes**

- Hydrology
- Aquaculture
- Fisheries
- Flat closures
- Primary Producers
- Eel grass decline
- Seal haulouts

- Eagle habitat
- Horseshoe crab sites
- Wildlife
- Biodiversity
- Soils suitability
- Bluff stability
- Estuary stress

# Mapping and Information Issues

- Currency and compatibility of data
- Not a one-time process
- Costs and need for expertise
- Confidentiality

- Maps as a basis for stakeholder input
- Maps as a basis for stakeholder education

#### Outreach

- Contacted more than 100 individuals
- Interviewed more than 50
- 70 attendees at public meetings and tour

# **Outreach Findings**

- All want clean water, green shores and job\$
- Disagree on methods
- There is some common ground between harvesters and landowners

#### **Common Ground**

- Property owners and harvesters want to learn to communicate and work together
- All can educate others
- Make it easy to be good stewards
- Efforts should be rewarded
- Concern about aquaculture in Taunton Bay
- More monitoring is a source of jobs as well as information
- Sustainability, both ecologic and economic

#### Governance

- Agreed to four principles
- Agreed to general shape of a regional management structure
- Disagreed on where authority should lie
- Disagreed on details of implementation

# Governance Principles

- 1. Public Trust
- 2. Ecosystem-based Management
- 3. Information-rich Management
- 4. Integrated Land-and-Water-Use Management

# **Next Steps**

- Disseminate the report card and maps
- Respond to the red and yellow flagged items
- Developing a limited mud-flat management project

#### **Conclusions**

- Great success on technical issues
- Continuing conflict regarding many issues in spite of agreement on principles